

REMARKS

Prior to the present reply, claims 1-16 were pending. Due to a restriction requirement, claims 2-15 have been withdrawn from consideration. In the Office action mailed May 13, 2008, claim 1 is examined and rejected under 35 U.S.C. § 103 as being obvious over U.S. Patent No. 7,022,815 (“the ‘815 patent”). Claim 1 is also objected to. The rejection and objection are each addressed below.

Claim amendments

Claim 1 has been amended, in part (b), to recite a fragment of SEQ ID NO:31 containing the subsequence: X₀₁ValX₀₂GluIleX₀₃LeuMetHisX₀₄X₀₅X₀₆LysX₀₇Leu. As this sequence represents amino acids 1-15 of SEQ ID NO:31, support for this change is found in original claim 1. Claims 2-16 have been cancelled, and new claims 17-32 have been added. Support for new claims 17 and 25, each of which recite that the peptide is administered in conjunction with a pharmaceutically acceptable carrier, is found, for example, in the paragraph bridging pages 7 and 8 of the specification. Support for claims 18-24, which recite particular amino acids of SEQ ID NO:31, is found, for example, in original claim 1. Support for new claims 26-28 is found, for example, in original claims 5-7, respectively. Support for new claims 29-31 is found in original claims 9-11, respectively. New claim 32 recites that the peptide is administered intravenously. Support for this change is found, for example, in the third paragraph on page 22 of the specification. Support for new claim 33 is found in original claim 8. These amendments add no new matter.

Rejection under 35 U.S.C. § 103

Claim 1 is rejected as being obvious over the ‘815 patent. In making this rejection, the Office focuses on part (b) of claim 1, which recites analogs or fragments containing amino acids 1-15 of SEQ ID NO:31. The Office interprets part (b) of the claim as

encompassing a peptide that (a) contains at least one of each of the amino acids 1-15 in SEQ ID NO:31 and (b) is effective in treating osteoporosis. In particular, the Office asserts that claim 1 does not require that the amino acids 1-15 of SEQ ID NO:31 be contiguous.

Having arrived at this interpretation, the Office rejects claim 1 as obvious over SEQ ID NO:16 of the '815 patent. This sequence encompasses a 34 amino acid peptide having the sequence AVAEIQLMHDLRKWL ("peptide 1") as its first 15 amino acids. The Office notes that claim 1 encompasses the peptide AVAEIELMHDLRKWL ("peptide 2"), which has a glutamine at position 6, unlike peptide 1. Because the Office interprets claim 1 as not requiring the amino acids 1-15 to be contiguous and because peptide 1 contains at least one of each of the amino acids in peptide 2, the Office asserts that peptide 1 is an "analog" of SEQ ID NO:31 having amino acids 1-15. On this basis, the Office asserts that claim 1 is rendered obvious by SEQ ID NO:16 of the '815 patent.

Applicants respectfully disagree. The requirement that the fragment or analog of claim 1 contain "amino acids 1-15" does, in fact, require that the amino acids to be contiguous. Nonetheless, and without assenting to this rejection, part (b) of claim 1 has been amended to recite "a fragment of SEQ ID NO:31 containing the subsequence X₀₁ValX₀₂GluIleX₀₃LeuMetHisX₀₄X₀₅X₀₆LysX₀₇Leu."

Claim 1 thus requires an Asp, Glu, or Lys at amino acid position 6 of the claimed peptide or peptide fragment. By contrast, all of the peptides disclosed in the '815 patent, including SEQ ID NO:16, have a Gln at position 6. Further, the '815 patent does not suggest that position 6 should be Asp, Gln, or Lys. Because this reference does not teach or suggest a peptide falling within the scope of claim 1, this reference cannot render claim 1 obvious. This rejection may therefore be withdrawn.

Applicants submit that new claims 17-33 are also free from the obviousness rejection. These claims are dependent from and incorporate all limitations of claim 1.

Thus the '815 patent likewise fails to teach or suggest all limitations of these claims, and cannot form the basis for rejecting new claims 17-33 as obvious.

Claim objection

The Office also objects to claim 1 as reciting the phrase "SEQ. ID. NO. 31," stating that this phrase should read "SEQ ID NO:31." Applicants have amended claim 1 to incorporate this change. This objection may be withdrawn.

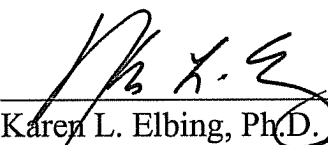
CONCLUSION

Applicants submit that the claims are in condition for allowance, and such action is respectfully requested. Enclosed is a Petition to extend the period for replying to the Office action for two (2) months, to and including October 14, 2008, and a check in payment of the required extension fee.

If there are any additional charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

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Karen L. Elbing, Ph.D.
Reg. No. 35,238

Clark & Elbing LLP
101 Federal Street
Boston, MA 02110
Telephone: 617-428-0200
Facsimile: 617-428-7045